

FinTech for a sustainable future : Bridging financial inclusion and economic progress

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Abstract

The rapid evolution of Financial Technology (FinTech) has significantly transformed financial services, fostering financial inclusion and driving economic growth. This study examines the impact of FinTech adoption on financial accessibility and economic progress, with a particular focus on its alignment with Sustainable Development Goals (SDG 8: Decent Work and Economic Growth & SDG 10: Reduced Inequalities). The sample comprises 300 users of digital financial services were asked to complete a structured questionnaire to collect primary data. In order to guarantee diverse voting rights, a stratified random selection technique had been utilized. Multiple regression analysis was used to observe the connections across macroeconomic indicators like rising incomes, expanding businesses, and financial wellness and important FinTech variables like digital payments, credit accessibility, mobile banking adoption, and financial literacy. According to the research, implementing FinTech is essential for improving financial mobility, encouraging entrepreneurial activity, and reducing income disparities. Legislators, financial institutions, and digital entrepreneurs can benefit from the findings of the investigation, which provide key insights into utilizing FinTech for sustainable economic development.

Subject Classification: 62P20, 91G80, 91B76.

Keywords: *FinTech adoption, Financial inclusion, Economic growth, Digital payments, Sustainable development goals (SDGs).*

1. Introduction

Global financial systems have undergone change as a result of financial technology, or FinTech, which has also improved transparency and spurred investment in the economy. The 2008 global financial crisis led to bank customers losing faith in traditional institutions so FinTech solutions arrived to address market voids during the restoration period. The financial technology market has shown extraordinary expansion during the last twenty years. The market value of FinTech during 2022 reached approximately \$226 billion according to Statista (2023) and experts

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predict it will surpass \$600 billion by 2029 while maintaining more than 16 percent annual growth. FinTech markets expanded globally because customers adopted mobile banking services together with Robo advisor stages and cryptocurrency systems. Mobile money solutions M-Pesa and Paytm have both enabled emerging countries across sub-Saharan Africa and South Asia to gain their very first financial services. Small businesses maintain power through FinTech because it provides reduced costs with better access to credit alongside increased financial education to build economic strength and boost cross-border business operations.

2. Review of literature

Levels of financial technology (FinTech) development used for enhancing financial inclusion and boosting economic progress received comprehensive research attention from 1990 through 2025. Financial exclusion stands as an essential obstacle blocking poverty reduction based on research. According to their research financial services accessibility stimulates economic development when people make increased investments in human capital along with entrepreneurship. According to Gomber et. al [1] financial services conducted with innovative technology enhance access and financial inclusion in developing nations.

The research explored mobile banking's effect on financial access primarily within sub-Saharan Africa[2]. By increasing the accessibility of financing for firms, well-functioning financial institutions foster ongoing economic development[3]. Microfinance institutions (MFIs) were assessed in the study to determine how they contribute to improving financial inclusion through technology. The research on financial health by examining technologically accelerated banking platforms. A study found that Kenyan households became more resilient to economic disruptions due to their access to mobile money-based digital financial solutions[4]. In their research on African mobile banking, showed that mobile financial services improved savings and enhanced household financial stability[5]. They pointed out that the introduction of digital credit systems through FinTech for business expansion[6]. Additionally, they investigated how FinTech contributes to sustainable development in emerging economies.

2.1 Research Gap

There's been a growing buzz around how FinTech can help with financial inclusion, but not much research dives into its effects on both small and medium-sized enterprises (SMEs) and marginalized

communities at the same time. A lot of existing studies miss the connection between digital payments, access to credit, and financial literacy when it comes to boosting SME growth[7].

2.2 Theory of FinTech and SDG

FinTech serves as a powerful enabler of sustainable development, especially when it aligns with inclusive policies and innovative ecosystems. The theory adapted for this study is depicted in the figure 1.

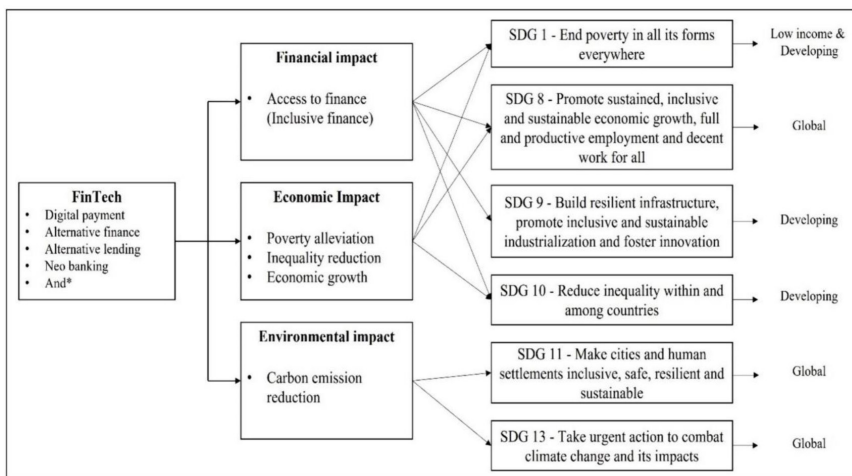


Figure 1

Theory of FinTech and SDG. Source: Author[7].

This framework showcases the diverse ways FinTech can promote financial inclusion, economic growth, and even environmental sustainability. By tapping into digital payments, alternative lending, and neo banking, FinTech plays a crucial role in supporting several of the UN's Sustainable Development Goals (SDGs)[8].

2.3 Objectives of the Study

1. To investigate how FinTech can improve financial inclusion for SMEs and marginalized communities.
2. To evaluate digital payment platforms access to credit and digital payments, in fostering SME growth and driving economic development.

- 3. To examine the influence of financial literacy and trust on the uptake of FinTech solutions.
- 4. To offer policy suggestions aimed at enhancing the contribution of FinTech to financial inclusion and economic growth.
- 5. A conceptual framework defines the core elements which affect the growth of SMEs and financial inclusion.

3. Methodology

The research employs a mixed-methods procedure which combines qualitative alongside quantitative evaluation methods. This study employs multiple regression analysis as a statistical tool to evaluate the connections between financial literacy and trust as well as digital payments, credit access and financial inclusion.

3.1 Hypotheses

H1: Financial literacy (FL) greatly promotes FinTech adoption and enhancing financial inclusion.

H2: Trust in digital financial services (T) greatly impacts the willingness to engage with FinTech platforms.

H3: Access to FinTech credit (AFC) has a positive influence on the growth and financial sustainability of SMEs.

H4: Digital payments (DP) support financial inclusion and drive economic development.

3.2 Reliability Analysis

Table 1
Reliability Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.740	19

Source: Output from SPSS

The above table 1 shows that the overall reliability of the dataset, as measured by Cronbach's Alpha, is found to be .740, considering the 19 items across all variables. This indicates a strong level of internal

consistency within the dataset, suggesting that the items collectively measure the constructs reliably.

3.3 Correlation Analysis

Table 2
Correlation Analysis of the constructs

Correlations						
		FL	T	AFC	DP	FI
FL	Pearson Correlation	1	.738**	.560**	.631**	.447**
	Sig. (2-tailed)		.000	1.095719	.000	2.756412
T	Pearson Correlation	.738**	1.000	.471**	.730**	.461**
	Sig. (2-tailed)	1.657739		1.14513	.000	4.532413
AFC	Pearson Correlation	.560**	.471**	1	.573**	.521**
	Sig. (2-tailed)	1.095719	.000		.000	7.006417
DP	Pearson Correlation	.631**	.730**	.573**	1.000	.584**
	Sig. (2-tailed)	4.296326	.000	9.158221		1.14621
FI	Pearson Correlation	.447**	.461**	.521**	.584**	1
	Sig. (2-tailed)	2.756412	.000	7.006417	.000	

Source: Output from SPSS[12]

The correlation analysis results (Table 2) show statistically significant positive correlations between all of the variables you listed (Financial literacy (F), Access to FinTech credit (AFC), Digital payments (DP) and the combined effect of financial literacy, trust, FinTech credit access, and digital payments (CE), and FinTech adoption and financial inclusion (FI)). The strongest positive correlation is between financial literacy (FL) and FinTech adoption and financial inclusion (FI), with a coefficient of .584. This means that there is a moderately strong positive relationship with (FI). Similarly, there is a strong positive correlation between Trust in digital financial services (T) and FinTech adoption and financial inclusion (FI) with a coefficient of .461. This implies that people are more probable to demonstrate favourable FinTech adoption and financial inclusion (FI) if they interact with a Trust in financial technology (T). With a value of .447, representing positivity between FinTech adoption and financial inclusion (FI) and access to FinTech credit (AFC). With a coefficient of .521, digital payments (DP) are positively correlated with both financial inclusion (FI)

and FinTech adoption. This implies that electronic payment methods may serve as a useful tool for positively influencing financial inclusion (FI) and FinTech adoption.

3.4 Regression Analysis

The independent variable, which is FinTech adoption and financial inclusion (FI) (CB), and the dependent variables, digital payments (DP), access to FinTech credit (AFC), and financial literacy (F), are evaluated using regression analysis. Table 3 displays the regression's findings.

Table 3
Regression Analysis

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.988	.372		-2.659	.005
FL	.041	.116	.030	.356	.002
T	.040	.142	.026	.285	.002
AFC	.336	.086	.268	3.930	.000
DP	.660	.141	.392	4.680	.000

Source: Output from SPSS[2]

From the above table 3 it is evident that influence between independent factors Financial Literacy (FL) with Trust (T) alongside Access to FinTech Credit (AFC) and Digital Payments (DP) on both Financial Inclusion and SME Growth. The model indicates positive statistical association between Financial Inclusion and SME Growth (0.988) with a significant probability level of 0.005. Financial inclusion and small business growth receive their greatest positive boost from Access to FinTech Credit (AFC) and Digital Payments (DP) as independent factors. The findings indicate a substantial positive relationship between access to FinTech credit and financial inclusion and small business development since AFC produces $B = 0.336$ ($p = 0.000$). Results show Digital Payments (DP) drives financial inclusion and SME growth at the highest level because its standardized Beta coefficient stands at 0.392 and its value reaches 0.660 ($p = 0.000$). The Beta values of Financial Literacy (FL) and Trust (T) measure 0.030 and 0.026

respectively which show statistical significance at $p = 0.002$. Financial literacy alongside trust help increase financial inclusion but AFC and DP produce greater effects on financial inclusion.

The standardized beta coefficients from our regression analysis really illuminate how various independent variables influence financial inclusion and the growth of small and medium-sized enterprises (SMEs). It's striking to see that digital payments ($\beta = 0.392$) emerge as the biggest game-changer, indicating that when these systems are widely used, they can significantly enhance SME performance and improve access to financial services. Access to FinTech credit ($\beta = 0.268$) is equally important, underscoring its role in fostering business growth and facilitating financial inclusion. In contrast, financial literacy ($\beta = 0.030$) and trust ($\beta = 0.026$) play a smaller part, but their contributions are still valuable. This implies that while these factors matter, they don't have the same level of impact as the direct financial tools that FinTech platforms provide. Overall, our findings highlight just how crucial FinTech infrastructure is especially digital payments and alternative credit access for driving inclusive growth among SMEs.

4. Findings of the study

Financial literacy stands as a fundamental factor for SMEs in their FinTech adoption process because companies with enhanced financial management understanding actively use digital financial services. Digital platform trust demonstrates significant importance since user concerns about security risks and regulatory issues and potential fraud negatively influence FinTech system usage. FinTech technologies enable small businesses to access credit easily and consequently they get better chances to obtain funding despite restrictions in traditional banking options. The adoption of digital payment methods drives financial efficiency and boosts transparency since users reduce their cash usage. The research indicates that establishing collaborations between financial institutions alongside policymakers should result in developing a framework that combines trust promotion with enhanced accessibility to digital financial services and financial literacy support.

5. Implications of the study

The research findings deliver multiple practical guidelines to political decision makers together with financial institutions as well as SMEs and

developers of technology. Regulatory frameworks become important for policymakers because they need to establish digital financial services secured through transparent systems where customers can place trust. Partnerships between financial institutions especially banks together with FinTech firms enable financial inclusion through expanded access to credit for minority population sectors.

6. Future research directions

Researchers need to explore multiple avenues with a focus on the use of artificial intelligence along with blockchain technology in developing FinTech-based financial services should be the main focus of future academic investigations. The investigation of how FinTech adoption affects sustainable economic growth patterns in multiple regions across the world will generate worthwhile findings.

7. Conclusion

FinTech has emerged as a transformative force in bridging financial inclusion and economic progress, particularly in emerging markets. The learning highlights the standing of monetary literacy, trust, credit access, and digital payments in driving the adoption of FinTech solutions and fostering SME growth. By leveraging digital financial services, businesses and individuals can overcome traditional financial barriers and contribute to economic sustainability. However, challenges such as regulatory concerns, cybersecurity risks in exploiting FinTech's potential for better long-term economic growth.

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